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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,046	07/31/2003	Steven W. Burd	EH-10718 (02-407)	9981
34704	7590	05/19/2006	EXAMINER	
BACHMAN & LAPOINTE, P.C. 900 CHAPEL STREET SUITE 1201 NEW HAVEN, CT 06510			FREAY, CHARLES GRANT	
			ART UNIT	PAPER NUMBER
			3746	

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/632,046	Applicant(s) BURD, STEVEN W.	
	Examiner Charles G. Freay	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/03, 12/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims, 1-5 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker et al (USPN 4,749,029).

Becker et al disclose a combustor heatshield (33) having an interior surface (top surface of Fig. 3), an exterior surface and plural cooling gas passages (33.7) extending between the two surfaces. There is a stud (bolt 35) having a distal threaded end and a standoff (33.6) which encircles the stud. There is a gap (a32 note col. 6 lns. 24-27) around the entire perimeter of the heat shield (the examiner notes that claim 1 does not require that there is a perimeter rail). Becker et al does not set forth the dimensions of the device. However, the distances of 0.2mm and 0.4mm are very small distances. It would have been obvious to one of ordinary skill in the art to make the standoff have at least this height in order to make the post durable enough to handle the extreme environment of combustor. It also would have been obvious to one of ordinary skill in the art and within the skill level of one of ordinary skill in the art to determine the correct height of the post which will provide the correct gaps a31 and a32 for cooling purposes of the shield. Additionally, it would have been obvious to one of ordinary skill in the art to

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use plural studs in order to provide greater and/or back-up holding support of the heatshield.

Claims 1, 3, 4, 6, 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over DuBell et al (USPN 5,758,503) in view of Drobny (USPN 4,748,806).

DuBell et al discloses a heatshield arrangement for a gas turbine combustor having a panel with an interior surface (24), an exterior surface (36) and a plurality of cooling gas passageways (38). There are also a plurality of studs (32) and a rail (26, 28, 30) which extends around and near to the entire perimeter. DuBell et al do not disclose that the studs have standoffs protruding a distance at least 0.2mm or 0.4mm beyond the rail. DuBell et al also does not disclose how close the rail is to the perimeter of the panel. Drobny discloses a heatshield panel securing stud which includes a standoff (portion 10 of the stud) which extends the full separation gap and then through and beyond the combustor shell (14). At the time of the invention it would have been obvious to one of ordinary skill in the art to substitute the Drobny studs for the DuBell et al studs in order to create an attachment structure which is easy to assemble. Further, the distances of 0.2mm, 0.4mm and 12.7 mm are very small distances. It would have been obvious to one of ordinary skill in the art to make the standoff have at least a height of 0.4 mm in order to make the post durable enough to handle the extreme environment of the combustor and it would have been obvious to one of ordinary skill in the art and within the skill level of one of ordinary skill in the art to determine the correct height of the post which will provide the correct spacing for cooling purposes of the

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shield. Additionally, it would have been within the skill level of one of ordinary skill in the art to determine the optimum or workable rail spacing around the perimeter of the panel.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pidcock et al and Jarrell disclose heatshields.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles G. Freay whose telephone number is 571-272-4827. The examiner can normally be reached on Monday through Friday 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Charles G Freay
Primary Examiner
Art Unit 3746

CGF
May 12, 2006